ABSTRACT

A method, device, and system control mobile packet flows forwarded between IP based networks. Individual packet flows on an IP user plane traverse middlebox functions that are controlled from a midcom agent. Each user flow registers its presence in each middlebox it encounters on its way from its source to its destination at the user plane. In response, each middlebox registers itself and the mobile flows it handles at the midcom agent with which they communicate using a midcom signalling protocol. The midcom agent comprises functionalities that its controlled middleboxes have and can provide control messages for how a middlebox shall handle a registered flow. The registration provides the midcom agent with knowledge of registered flows and middleboxes which allows the midcom agent to send control orders to the middleboxes that registered themselves, the orders pertaining to the handling of the flows at the respective middleboxes. A mechanism for control signalling at the IP control plane is described.